

## **METHOD OF FORMING OPPOSING INTERNALLY PRELOADED CONICAL ELASTOMERIC BEARING ASSEMBLY**

### **ABSTRACT OF THE DISCLOSURE**

A method is provided for producing an elastomeric conical flap bearing assembly for  
5 rotary aircraft including an inboard bearing element and outboard bearing element disposed  
within an outer housing. The outer housing has an outer surface configured with a plurality  
of radially extending flange elements. The outer housing has an inner surface configured to  
receive tapered conical bearing elements. A tapered conical elastomeric inboard bearing  
10 element is inserted into its outer housing and is bonded to the inner surface. A tapered  
conical elastomeric outboard bearing element is inserted into the outer housing, wherein the  
conical tapers of the respective bearing elements are directed in opposing directions. The  
bearing elements are press-fit together and the outer surface of the outboard bearing is  
bonded to the inner surface of the outer housing forming a bearing assembly.  
Simultaneously, an axial pre-load is applied to the bearing assembly. A plurality of bearing  
15 coupler lugs are attached to the bearing assembly.